

CLAIMS

What is claimed is:

1. A method for electrolyzing a continuous length of metal, the method comprising the steps of:

5 firstly passing the length of metal through electrolysis fluid contained in a first bath that also contains a first electrode connected to a first pole of a power supply;

secondly passing the length of metal through electrolysis fluid contained in a second bath that also contains a second electrode connected to a second pole, opposite to the first pole, of the power supply; and

10 using the length of metal as an electrical conductor for completing the electrical circuit between the electrolysis fluid of the first bath and the electrolysis fluid of the second bath.

2. The method of claim 1, further comprising the step of:

15 passing the length of metal through the first bath and through the second bath by passing through a plurality of seals below a fluid level of the electrolysis fluid such that each one of the plurality of seals allows passage of the length of metal while limiting fluid loss.

3. The method of claim 2, further comprising the step of:

cooling the length of metal by providing a one of the plurality of seals such that the one seal maintains immersion of the length of metal in electrolysis fluid while the length of metal passes from the first bath to the second bath.

20 4. The method of claim 1, wherein:

the power supply is an AC power supply.

5. The method of claim 1, further comprising the step of:

25 moving the length of metal in one direction through the first bath and through the second bath.

6. A two-bath electrolysis line for performing electrolysis on a continuous length of metal, the electrolysis line comprising:

a first bath containing electrolysis fluid filled to a fluid level, and a first electrode, the first electrode being connected to a first pole of a power supply;

30 a second bath containing electrolysis fluid filled to a fluid level, and a second electrode, the second electrode being connected to a second pole, opposite to the first pole, of the power

supply;

a conveyance path such that the length of metal passes first through the electrolysis fluid in the first bath, and second through the electrolysis fluid in the second bath; and

5 a conductor of electrical current between the electrolysis fluid in the first bath and the electrolysis fluid in the second bath, the conductor being the length of metal.

7. The electrolysis line of claim 6, further comprising:

a plurality of seals that allow passage of the length of metal through the first bath and through the second bath below the fluid level of the electrolysis fluid while limiting fluid loss.

8. The electrolysis line of claim 7, wherein the plurality of seals comprises:

10 a plurality of grommet seals that are mounted within holes below the fluid level of the electrolysis fluid in each of the first bath and second bath, the holes being located in opposed ends of the first bath and in opposed ends of the second bath.

9. The electrolysis line of claim 8, wherein:

a one of the plurality of grommet seals connects the first bath to the second bath.

15 10. The electrolysis line of claim 9, wherein:

an end of the first bath abuts an end of the second bath; and

the one of the plurality of grommet seals is mounted within holes through the abutting ends.

11. The electrolysis line of claim 6, wherein:

20 the power supply is an AC power supply.

12. The electrolysis line of claim 6, further comprising:

an advancing device that moves the length of metal through the first and second baths.